What is claimed is:

1.   A reduction processing method comprising:

an offset figure generating step for generating, based on a geometric figure having a plurality of vertices, an offset figure by translating sides, formed by joining said vertices, inwardly of said geometric figure by a distance equal to a prescribed sizing amount;

an offset locus line segment generating step for generating an offset locus line segment by joining each of said vertices to an offset vertex corresponding to said each vertex, said offset vertex being located on said offset figure;

an intersection point detecting step for detecting a first intersection point at which offset locus line segments associated with an adjacent pair of said vertices intersect each other;

an offset vertex deleting step for deleting the offset vertices each located at one end of one of the offset locus line segments intersecting at said first intersection point; and

an offset figure revising step for revising said offset figure by finding a second intersection point at which offset figure line segments, forming said offset figure by joining said offset vertices, intersect each other, and by setting said second intersection point as an offset vertex in place of said deleted offset vertices.

2.   A reduction processing method as claimed in claim 1, wherein

in said intersection point detecting step, said detected first intersection point is sorted in order of increasing distance from the side of said geometric figure which is associated with said first intersection point, and

in said offset vertex deleting step, the offset vertices associated with said first intersection

point are deleted in accordance with said sorted order.

3.   A reduction processing method as claimed in claim 1 or 2, wherein

in said intersection point detecting step, if two offset figure line segments extending from the respective offset vertices associated with said detected first intersection point are parallel to each other, an imaginary straight line passing through said first intersection point and extending parallel to said two offset figure line segments is drawn, third intersection points are found each defining a point at which an offset locus line segment associated with the offset vertex at an opposite end of one of said two offset figure line segments intersects said imaginary straight line and, of said third intersection points thus found, the third intersection point nearer to said first intersection point is selected, and

in said offset vertex deleting step, the offset vertices associated with said sorted first intersection point and the offset vertex on the offset locus line segment associated with said selected third intersection point are deleted.

4.   A computer readable storage medium having a reduction processing program stored thereon for causing a computer to execute program steps comprising:

an offset figure generating step for generating, based on a geometric figure having a plurality of vertices, an offset figure by translating sides, formed by joining said vertices, inwardly of said geometric figure by a distance equal to a prescribed sizing amount;

an offset locus line segment generating step for generating an offset locus line segment by joining each of said vertices to an offset vertex corresponding to said each vertex, said offset vertex being located on said offset figure;

an intersection point detecting step for

detecting a first intersection point at which offset
locus line segments associated with an adjacent pair of
said vertices intersect each other;

an offset vertex deleting step for
deleting the offset vertices each located at one end of
one of the offset locus line segments intersecting at
said first intersection point; and

an offset figure revising step for
revising said offset figure by finding a second
intersection point at which offset figure line segments,
forming said offset figure by joining said offset
vertices, intersect each other, and by setting said
second intersection point as an offset vertex in place of
said deleted offset vertices.

5.   A computer readable storage medium having a
reduction processing program stored thereon for causing a
computer to execute said program steps as claimed in
claim 4, wherein

in said intersection point detecting step,
said detected first intersection point is sorted in order
of increasing distance from the side of said geometric
figure which is associate with said first intersection
point, and

in said offset vertex deleting step, the
offset vertices associated with said first intersection
point are deleted in accordance with said sorted order.

6.   A computer readable storage medium having a
reduction processing program stored thereon for causing a
computer to execute said program steps as claimed in
claim 4 or 5, wherein

in said intersection point detecting step,
if two offset figure line segments extending from the
respective offset vertices associated with said detected
first intersection point are parallel to each other, an
imaginary straight line passing through said first
intersection point and extending parallel to said two
offset figure line segments is generated, third

intersection points are found each defining a point at
which an offset locus line segment associated with the
offset vertex at an opposite end of one of said two
offset figure line segments intersects said imaginary
straight line, and of said third intersection points thus
found, the third intersection point nearer to said first
intersection point is selected, and

in said offset vertex deleting step, the
offset vertices associated with said sorted first
intersection point and the offset vertex at said opposite
end of said offset locus line segment associated with
said selected third intersection point are deleted.

7.   A reduction processing method which is applied
to a difference figure generated by overlaying two
geometric figures, to verify based on the size of said
difference figure the validity of processing applied to
each of said geometric figures, comprising:

a first vertex set storing step for
storing a set of vertices included in said difference
figure as a first vertex set;

an offset figure generating step for
translating an imaginary straight line from each side of
said difference figure inwardly of said figure by a
distance equal to a prescribed sizing amount and thereby
generating an offset figure bounded by said imaginary
straight lines, and for storing a set of offset vertices
included in said offset figure as a second vertex set;

an offset locus line segment generating
step for generating an offset locus line segment by
joining each vertex of said difference figure to one of
said offset vertices that corresponds to said each
vertex;

an intersection point detecting step for
detecting the presence or absence of a first intersection
point at which two offset locus line segments extending
from adjacent vertices of said difference figure
intersect each other;

a sorting step for sorting said first
intersection point in order of increasing distance, based
on the distance between said first intersection point and
the side of said difference figure which is associated
with said two offset locus line segments intersecting at
said first intersection point; and

a vertex revising step for computing a
second intersection point which defines an intersection
between two offset figure sides that extend from the
offset vertices of said two offset locus line segments
intersecting at said first intersection point selected by
sorting, deleting said offset vertices associated with
said selected first intersection point from said second
vertex set, storing said second intersection point as a
new vertex in said second vertex set, deleting from said
first vertex set the vertices of said difference figure
that are connected to said two offset locus line
segments, and storing said selected first intersection
point as a new vertex of said difference figure in said
first vertex set.

8.   A reduction processing method as claimed in
claim 7, wherein said geometric figures are each
generated by applying a different processing system.

9.   A reduction processing method as claimed in
claim 7, wherein in said vertex revising step

when said two offset figure sides are
parallel to each other, and when said second intersection
point does not exist,

a second imaginary straight line passing
through said first intersection point and parallel to
said two offset figure sides is generated, third
intersection points are found each defining a point at
which said second imaginary straight line intersects one
of two offset locus line segments extending from the
offset vertices located at ends of the offset figure
sides associated with said first intersection point, and
of said third intersection points thus found, the third

intersection point nearer to said first intersection point is selected, and

of said parallel offset figure sides, the offset vertex associated with the offset figure side connected to the offset locus line segment containing said selected third intersection point and the offset vertices of the offset figure side associated with said first intersection point are deleted from said second vertex set, an intersection point is found at which the offset figure sides extending from said deleted offset vertices intersect each other, and said intersection point is stored in said second vertex set as a new vertex in place of said deleted vertices.

10. A computer readable storage medium having a reduction processing program stored thereon for causing a computer to execute program steps wherein reduction processing is applied to a difference figure generated by overlaying two geometric figures, to verify, based on the size of said difference figure, the validity of processing applied to each of said geometric figures, said program steps comprising:

a first vertex set storing step for storing a set of vertices included in said difference figure as a first vertex set;

an offset figure generating step for translating an imaginary straight line from each side of said difference figure inwardly of said figure by a distance equal to a prescribed sizing amount and thereby generating an offset figure bounded by said imaginary straight lines, and for storing a set of offset vertices included in said offset figure as a second vertex set;

an offset locus line segment generating step for generating an offset locus line segment by joining each vertex of said difference figure to one of said offset vertices that corresponds to said each vertex;

an intersection point detecting step for

detecting the presence or absence of a first intersection point at which two offset locus line segments extending from adjacent vertices of said difference figure intersect each other;

a sorting step for sorting said first intersection point in order of increasing distance, based on the distance between said first intersection point and the side of said difference figure which is associated with said two offset locus line segments intersecting at said first intersection point; and

a vertex revising step for computing a second intersection point which defines an intersection between two offset figure sides that extend from the offset vertices of said two offset locus line segments intersecting at said first intersection point selected by sorting, deleting said offset vertices associated with said selected first intersection point from said second vertex set, storing said second intersection point as a new vertex in said second vertex set, deleting from said first vertex set the vertices of said difference figure that are connected to said two offset locus line segments, and storing said selected first intersection point as a new vertex of said difference figure in said first vertex set.

11. A computer readable storage medium as claimed in claim 10, wherein said geometric figures are each generated by applying a different processing system.

12. A computer readable storage medium as claimed in claim 10 or 11 wherein, in said vertex revising step,

when said two offset figure sides are parallel to each other, and when said second intersection point does not exist,

a second imaginary straight line passing through said first intersection point and parallel to said two offset figure sides is generated, third intersection points are found each defining a point at which said second imaginary straight line intersects one

of two offset locus line segments extending from the
offset vertices located at ends of the offset figure
sides associated with said first intersection point, and
of said third intersection points thus found, the third
intersection point nearer to said first intersection
point is selected, and

        of said parallel offset figure sides, the
offset vertex associated with the offset figure side
connected to the offset locus line segment containing
said selected third intersection point and the offset
vertices of the offset figure side associated with said
first intersection point are deleted from said second
vertex set, an intersection point is found at which the
offset figure sides extending from said deleted offset
vertices intersect each other, and said intersection
point is stored in said second vertex set as a new vertex
in place of said deleted vertices.